

BROADBAND WAVEFORM RECONSTRUCTION FOR RADAR

ABSTRACT OF THE DISCLOSURE

Resolution of a radar operating within a bandwidth is improved by defining a quantity
5 of substantially rectangular sub-band filters to subdivide the bandwidth in the frequency
domain into the quantity of sequential sub-bands having a sub-bandwidth. Each signal sent
by the radar is associated with a transmission temporal moment. Each of the quantity of
return signals received is routed in one to one correspondence to the sub-band filters, each
signal being received at a corresponding sub-band filter. The return signals received are
10 summed by synchronizing the associated transmission temporal moment to produce a
reconstructed return signal.